

The opinion in support of the decision being entered today was not written  
for publication and is not binding precedent of the Board.

Paper No. 31

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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Ex parte SANDRINE DECOSTER, VERONIQUE DOUIN  
and VIRGINIE BAILLY

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Appeal No. 2005-0982  
Application No. 09/692,716

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HEARD: August 9, 2005

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Before WILLIAM F. SMITH, SCHEINER and MILLS, Administrative Patent Judges.

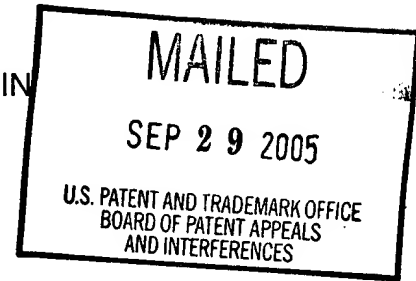
SCHEINER, Administrative Patent Judge.

**PROCEDURAL MATTERS**

On November 28, 2003, having considered appellants' Brief on Appeal (paper no. 19, filed June 4, 2003), and the examiner's Answer (paper no. 20, entered August 26, 2003), a panel of the Board handed down a decision "on brief," i.e., without an oral hearing, affirming the examiner's final rejection of claims 1 thorough 104, all of the claims pending in the application (assigned Appeal No. 2003-2140).<sup>1</sup> Subsequently, a communication (paper no. 25) was received from appellants informing the Board that a Reply Brief and a separate Request for Oral Hearing had been submitted on October

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<sup>1</sup> Administrative Patent Judge Paul Lieberman retired subsequent to the Board's decision in Appeal No. 2003-0982. Accordingly, Administrative Patent Judge William F. Smith has been substituted for Administrative Patent Judge Lieberman. See In re Bose Corp., 772 F.2d 866, 869, 227 USPQ 1, 4 (Fed. Cir. 1985).



27, 2003, and requesting that "the Decision mailed November 28, 2003, [ ] be vacated in order to have the October 27, 2003, Reply Brief considered and [an] Oral Hearing scheduled."

Having determined that both the Reply Brief and the Request for Oral Hearing were timely filed, but were not entered into the record before the application was forwarded to the Board for decision, we vacated<sup>2</sup> the Decision of the Board entered November 28, 2003 in Appeal No. 2003-2140 and remanded the application to the jurisdiction of the examiner to consider appellants' Reply Brief (paper no. 24) and take appropriate action. The examiner entered and considered the Reply Brief, and forwarded the application to the Board without further comment (paper no. 27, mailed February 28, 2005) for a decision on appeal. Having heard appellants' oral arguments on August 9, 2005, we will proceed to a decision.

#### DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 1 through 104, all the claims pending in this application.

According to appellants, the invention is directed to a cosmetic composition comprising at least one non-cellulose thickener and a silicone copolymer having a specific formula and range of dynamic viscosity, in a cosmetically acceptable medium. Claims 1, 37 and 64 are representative of the invention, and are reproduced in the Appendix accompanying appellants' Brief on Appeal.

The references relied on by the examiner are:

Quack et al. (Quack)	4,237,243	Dec. 2, 1980
Restle et al. (Restle)	6,039,936	Mar. 21, 2000
Decoster et al. (Decoster)	6,150,311	Nov. 21, 2000
Mougin et al. (Mougin)	6,166,093	Dec. 26, 2000

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<sup>2</sup> See paper no. 26, mailed August 25, 2004.

Dalle et al. (Dalle)  
(published European Patent Office Application)

EP 0 874 017 A2

Oct. 28, 1998

Zviak, The Science of Hair Care, pp. 68-70 (Marcel Dekker, Inc. 1986)

The claims stand rejected as follows:

Claims 1-18, 21 and 101-104 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Dalle in view of Zviak.

Claims 1-20, 22, 24 and 101-104 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Dalle in view of Quack.

Claims 1-19, 22, 23, 25-36 and 101-104 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Dalle in view of Mougin.

Claims 37-63 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Dalle and Mougin in view of Restle.

Claims 64-100 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Dalle and Mougin in view of Decoster.

#### OPINION

We have carefully considered all of the arguments advanced by appellants and the examiner and agree with the examiner for the reasons stated in the Answer, and the reasons herein, that each of the examiner's rejections is well founded. Accordingly, we affirm each of the rejections.

As an initial matter, we note appellants' position that the claims are grouped into five groups corresponding to each of the rejections of record – within each group, the claims “stand or fall together” (Brief, pages 4 and 5). See 37 CFR 1.192(c)(7) (2002). We note appellants' remarks in the Reply Brief regarding the grouping of claims, wherein appellants disagree with the examiner's statement that the “claims stand or fall together,” “[b]ecause not all rejections apply to all claims” (Reply Brief, pages 1-2).

However, reading the Brief, the Answer, and the Reply Brief together, it would appear that there is no real conflict here – there are five groups, each one corresponding to a rejection of record; the claims stand or fall together within each group.

### The Rejections of Claim 1

With respect to each of the rejections of record, appellants are of the position that “there is no clear and particular motivation to combine the teachings of the cited documents” (Brief, page 7). See similar language in the Brief, page 11, in the sentence bridging pages 12 and 13, pages 14, 16, 17 and 18. We disagree with appellants’ conclusion.

Dalle is directed to a silicone in water emulsion. Dalle, page 2, lines 3-5. We find that the emulsion of Dalle is useful for personal care applications including personal and facial cleansers, and hair shampoos. Id., page 5, lines 47-47. The emulsion may further be used in cosmetics including mascara. Id.

Dalle’s emulsion comprises a composition containing at least one polysiloxane and at least one organic silicon material that reacts with the polysiloxane by chain extension. Id., page 2, lines 30-34. We find that the polysiloxane is described in Formula I, page 3, lines 1-17, and is substantially the same as the formula of component (I) of the claimed subject matter. We find that R' may be a group required for the chain extension reaction and includes hydrogen, vinyl, allyl and hexenyl. Id., page 3, lines 12-13. We find that these are the same groups required by dependent claims 2 and 3. We find that the second component that reacts with polysiloxane can likewise be a polysiloxane. Id., page 3, lines 25-26. We find that the reaction occurs between a polysiloxane having one reactive group and a second polysiloxane having a second reactive group which reacts with the first polysiloxane. Id., page 3, lines 26-29.

We further find that the silicone copolymer formed has the identical viscosity range of  $10^6$  to  $10^8$  mm<sup>2</sup>/sec required by the claimed subject matter. Id., page 5, lines 40-41 and claim 16.

Based on the above findings, we conclude that the silicone copolymer of Dalle is the same as that of the claimed subject matter, there being no argument by appellants that the copolymer of the claimed subject matter is different from that described by Dalle.

Dalle teaches that a number of materials may be added to the emulsion either during the preparation of the emulsion or subsequent thereto. Dalle teaches that the additional materials which may be present include surfactants and thickeners. The surfactants may include non-ionic, cationic, anionic alkylpolysaccharides and amphoteric surfactants. Dalle, page 4, lines 20-56; page 6, line 2; and claims 1 and 5-10. We further find that thickeners are generically disclosed (id., page 4, line 58, and claim 12), but Dalle does not disclose any specific thickeners.

The secondary references, Zviak, Quack and Mougin however, each disclose compositions useful for personal care applications, wherein conventional thickeners constitute components of the compositions. We find that Zviak describes six classes of thickeners that are conventional components of shampoos. Zviak, page 68. Only one of the six classes contains cellulose thickeners.

Similarly, Quack discloses cosmetic compositions including shampoos and cleansers (Quack, column 12, lines 1-9; column 14, lines 21-40 and column 15, lines 2-12), which include cross-linked polymers as viscosity increasing agents<sup>3</sup> (id., column 3,

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<sup>3</sup> The term "thicken," or the verb "thickening," or "thickened" is defined, "to make thick, dense or viscous in consistency. See Webster's Ninth New Collegiate Dictionary, p. 225 (Merriam-Webster, Inc., Springfield, MA 1986). Therefore, a viscosity increasing agent is a thickener.

line 8 to column 5, line 3 and column 7, lines 27-38). Furthermore, we find that these polymers may be combined with other thickeners, only one of which is cellulosic (id., column 7, line 38).

Mougin is also directed to cosmetic compositions including hair care products and makeup such as mascara. Mougin, column 1, lines 7-9 and 26-30. We find that the hair care products include shampoos. Id., Example 12. Mougin's compositions may contain thickeners. Id., column 15, lines 39-41. We find that Mougin describes seven classes of thickeners, only one of which is a cellulose derivative. Id., column 16, lines 9-35.

We note appellants' argument that "both silicone copolymers and non-cellulose thickeners can be found in hair care products, [but] it cannot be true that it would have been obvious to one skilled in the art to combine every substance in every hair care product in every conceivable combination" (Reply Brief, page 5), and the examiner's reliance on In re Kerkhoven, 626 F.2d 848, 205 USPQ 1069 (CCPA 1980) in this regard is misplaced (Reply Brief, page 5-6, for example). We do not disagree that Kerkhoven is inapposite here. Nevertheless, we would point out that the rejections discussed here are not based on the premise that combining "every substance in every hair care product in every conceivable combination" would have been obvious. Dalle teaches that thickeners are conventional components of polysiloxane-containing personal care products such as shampoos, cleansers and cosmetics. The secondary references, Zviak, Quack and Mougin describe thickeners commonly used in personal care products. The mere fact that each reference discloses several classes of thickeners, without particularly singling out non-cellulose thickeners, does not make any one of the thickeners less obvious than any other, especially here, where the possibilities are

relatively limited. See Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 807, 10 USPQ 1843, 1846 (Fed. Cir. 1989), wherein it was held that disclosure of “a multitude of effective combinations” (approximately 1200) “does not render any particular combination less obvious . . . especially . . . [where] the claimed composition is used for the identical purpose taught by the prior art.”

Based on the above evidentiary findings, we conclude that it would have been obvious to one of ordinary skill in the art to have added at least one non-cellulose thickener to the composition of Dalle based upon the disclosure of Dalle and any of the references to Zviak, Quack or Mougín. Accordingly, we affirm each of the rejections over Dalle in view of Zviak, Quack or Mougín.

The rejection of Claims 37-63

Claim 37 additionally requires the presence of a cationic surfactant selected from four groups of cationic surfactants. It is appellants’ position with respect to the rejection of the claimed subject matter over Dalle in view of Mougín and Restle, that “MOUGIN does not teach or suggest Appellants’ viscosity range, let alone any viscosity range.” Brief, page 19. Furthermore, appellants assert that “DALLE teaches away from using cationic surfactants with emulsions like those in the instant claims” (Reply Brief, page 9) and “one of ordinary skill in the art with DALLE before her would not think it prudent to incorporate the cationic surfactants of RESTLE for fear of the drawbacks explicitly disclosed in DALLE.” Brief, pages 19 and 20. We are not persuaded by these arguments.

As to the issue of viscosity, we found supra that Dalle discloses the same silicone copolymer as required by the claimed subject matter, the silicone copolymer having the same viscosity range as required by claims 1. In contrast, Mougín was relied

upon by the examiner to show the conventionality of the various thickeners that may be added to cosmetics or shampoos. The viscosity of Mougin's composition is not at issue, particularly as the only viscosity required by the claimed subject matter is that of the silicone copolymer formed from the reaction of the polysiloxane and silicone components. That viscosity range is explicitly taught by Dalle.

As to appellants' assertions that Dalle teaches away from the use of cationic surfactants, and that one of skill in the art would not find it prudent to add Restle's cationic surfactants to Dalle's compositions, we find that Dalle discusses the drawbacks of using cationic polymers in the context of a prior art process known as "emulsion polymerization" (Dalle, page 2, lines 12-20), not in Dalle's method of making silicone in water emulsions. Indeed, the use of cationic surfactants in Dalle's copolymers is explicitly taught by Dalle. Dalle, page 4, lines 23-27.

Examples of cationic surfactants include quaternary ammonium hydroxides such as tetramethylammonium hydroxide, octyltrimethylammonium hydroxide, dodecyl-trimethyl ammonium hydroxide, hexadecyltrimethyl ammonium hydroxide, octyldimethylbenzylammonium hydroxide, decyldimethylbenzyl ammonium hydroxide, didodecyldimethyl ammonium hydroxide, dioctadecyl dimethylammonium hydroxide, tallow trimethylammonium hydroxide and cocotrimethylammonium hydroxide as well as corresponding salts of these materials[.]

Id., page 4, lines 26-30, emphasis ours. We find that the same cationic surfactants in the form of salts are disclosed by Restle at column 3, lines 9-22. We find that the quaternary ammonium salt of claim 37, quaternary ammonium salt A), is likewise directed to a salt of a quaternary ammonium hydroxide wherein the definitions of each of radicals R<sub>1</sub> through R<sub>4</sub> are explicitly met by the above disclosure in both Dalle and Restle. As required by claim 37, each of the radicals are aliphatic radicals having 1 to 30 carbon atoms. The sole distinction between the cationic surfactants disclosed by



Dalle and those required by the claimed subject matter in 37A) is that the latter use anions other than the hydroxide specifically disclosed by Dalle. Inasmuch as Restle has explicitly included the corresponding salts in place of the hydroxide of Dalle and these salts form the cationic surfactants of the claimed subject matter, it would have been obvious to the person having ordinary skill in the art to have used the specific cationic surfactant salts required by the claimed subject matter.

Based upon the above findings, we affirm the rejection of claims 37-63.

#### The Rejection of Claims 64-100

We likewise sustain the rejection of claims 64-100. Claim 64 is representative of this group of claims and requires only the addition of a surfactant chosen from anionic, nonionic, and amphoteric surfactants. Inasmuch as we have already found that Dalle teaches the addition of each of these surfactants, no further inquiry is needed with respect to the teachings of Decoster. As a matter of record, however, we find that Decoster is directed to cosmetic hair care products such as shampoos which contain each of the classes of surfactants required by the claimed subject matter. Decoster, column 1, lines 3-18 and column 2, line 29 to column 4, line 50. We conclude that their use in Dalle's compositions is a matter within the skill of the art. Accordingly, we sustain the rejection of the examiner.

#### DECISION

The rejection of claims 1-18, 21 and 101-104 under 35 U.S.C. § 103 (a) as being unpatentable over Dalle in view of Zviak is affirmed.

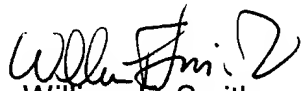
The rejection of claims 1-20, 22, 24 and 101-104 under 35 U.S.C. § 103 (a) as being unpatentable over Dalle in view of Quack is affirmed.

The rejection of claims 1-19, 22, 23, 25-36 and 101-104 under 35 U.S.C. § 103 (a) as being unpatentable over Dalle in view of Mougin is affirmed.

The rejection of claims 37-63 under 35 U.S.C. § 103 (a) as being unpatentable over Dalle and Mougin in view of Restle is affirmed.

The rejection of claims 64-100 under 35 U.S.C. § 103 (a) as being unpatentable over Dalle and Mougin in view of Decoster is affirmed.


AFFIRMED



William F. Smith  
Administrative Patent Judge



Toni R. Scheiner  
Administrative Patent Judge



Demetra J. Mills  
Administrative Patent Judge

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